

Development of Novel Activated Carbon Composites

Project Lead






Oak Ridge National
Laboratory (ORNL)
Oak Ridge, TN

Description

A novel monolithic adsorbent carbon, manufactured from carbon fibers, has been invented jointly by researchers at Oak Ridge National Laboratory (ORNL) and the University of Kentucky Center for Applied Energy Research. The novel material, referred to as a carbon-fiber composite molecular sieve (CFCMS) is fabricated at ORNL in the Carbon Materials Technology Group. The purpose of this activity is to activate samples of the CFCMS and to perform subsequent analyses of the surface area, pore width distributions, and micropore volume. Activities are directed toward an understanding of the relationships between the activation process and the micro- or mesopore structure that develops. This project includes a CRADA between Oak Ridge National Laboratory and ZeTek Power Corporation. ORNL will collaborate with ZeTek to optimize the fuel cell size-dependent design of manufacturable CO₂ scrubbers for oxidant (air) and fuel (reformate) streams for ZeTek fuel cell systems. Oxidant and fuel CO₂ scrubbers for a 10 kW system will be constructed.

Duration: 10/1/97 - 9/30/01

Product Support Areas

Gasification Technologies	Combustion Technologies	Sequestration	Environmental & Water Resources	Advanced Turbine & Engines	Fuel Cells
					



Project: FEAA03
Code: ORNL-3B,C,D

Contact Information

Robert Romanosky
NETL Product Manager
(304) 285-4721
robert.romanosky@netl.doe.gov

Richard Read
NETL Project Manager
(412) 386-5721
richard.read@netl.doe.gov